

NNSA Administrator Gordon-Hagerty touts mission, teamwork at all-hands meeting

By Troy Rummler

Lisa Gordon-Hagerty, DOE under secretary for nuclear security, signaled strong federal support for Sandia’s mission and infrastructure improvements in her all-hands presentation in Albuquerque on June 12. The meeting was part of an all-day tour of the Labs.

This was her first visit to Sandia New Mexico as under secretary. She toured Sandia’s California campus six weeks ago.

In her remarks, she championed recent and proposed budget increases. “Our work is cut out for us, but finally we have been given the resources to do it,” she said. Gordon-Hagerty voiced a strong commitment to modernize aging infrastructure. She also discussed plans to break ground soon for the \$174.5 million NNSA Albuquerque Complex, which Congress authorized in April, an announcement met with applause.

She made reference to a long-term plan for renewal of Sandia’s Microsystems Engineering, Science and Applications complex, saying the administration is “ensuring the U.S. ability to produce secure, radiation-hardened microelectronic systems beyond 2025.”

Another top priority that Gordon-Hagerty noted was investing in people and teams. She said NNSA will increase investments in professional development programs and in building a stronger pipeline of young talent. Fielding questions following her remarks, Gordon-Hagerty acknowledged the difficulty of competing with private-sector salaries and affirmed her department’s desire to correct disparities as much as possible.

Sandia achievements that received praise included the completion of 135 nuclear deterrence milestones, delivering new radiation detection equipment for U.S.

arms control treaty inspectors and new formal processes that improve the readiness of responders to nuclear accidents or incidents.

Ms. Gordon-Hagerty was sworn in in February. She has more than 30 years of national security experience, including serving as the Director for Combatting Terrorism on the National Security Council. During her visit,

the NNSA administrator met with labs executive leadership to discuss the nuclear weapons modernization program, upgrades to MESA and hypersonics. She also toured the neutron generator facility, Z Machine, and the annular core research reactor. Following her visit to Albuquerque, she continued on to the Nevada National Security Site.



IT ALL HAPPENS THERE — Inspecting a Z machine target are (left to right) Keith Matzen, director of the Pulsed Power Sciences Center, Susan Seestrom, chief research officer and associate labs director for Advanced Science and Technology and NNSA Administrator Lisa Gordon-Hagerty. (Photo by Randy Montoya)

DOE to deploy Arm-based supercomputer prototype at Sandia

By Neal Singer

Microprocessors designed by Arm are ubiquitous in automobile electronics, cellphones and other embedded applications, but until recently they have not provided the performance necessary to make them practical for high-performance computing.

Astra — one of the first supercomputers to use processors based on the Arm architecture in a large-scale high-performance computing platform — is expected to be deployed at Sandia later this summer.

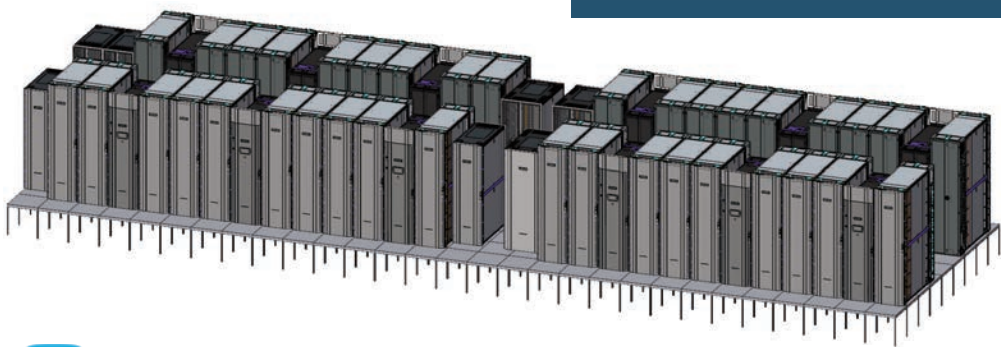
The DOE’s NNSA announced that Astra, the first of a potential series of advanced architecture prototype platforms, will be deployed as part of its Vanguard program. Vanguard will evaluate the feasibility of emerging high-performance computing architectures as production platforms to support NNSA’s mission to maintain and enhance the safety, security and effectiveness of the U.S. nuclear stockpile.

“One of the important questions Astra will help us answer is how well does the peak performance of this architecture translate into real performance for mission applications,” says Mark Anderson, program director for NNSA’s Advanced Simulation and Computing program, which funds Astra.

Astra will be based on the recently announced Cavium Inc. ThunderX2 64-bit Arm-v8 microprocessor. The platform will consist of 2,592 compute nodes, of which each is 28-core, dual-socket. Its theoretical peak will be more than 2.3 petaflops, equivalent to 2.3 quadrillion floating-point operations (FLOPS), or calculations, per second. While being the fastest machine is not one of the goals of Astra or of the Vanguard program in general, a single Astra node is roughly one hundred times faster than a modern Arm-based cellphone.

A first step for Vanguard

Scott Collis, director of Sandia’s Center for Computing Research, says, “Emerging architectures come with many challenges. Since the NNSA has not previously



A computer-automated design conception of Sandia’s Astra supercomputer, used to work out the floor layout of the supercomputer’s compute, cooling, network and data storage cabinets. Illustration courtesy of Hewlett Packard Enterprise.

“Arm has been deeply engaged with Sandia National Laboratories working to comprehend and deliver on the needs of the high-performance computing community. We are eager to support the Vanguard program as a key milestone deployment for Arm and our partners, delivering on a shared vision to spur innovation in this critical domain.”

— Drew Henry, senior vice president and general manager of Arm’s infrastructure business line

deployed high-performance computing platforms based on Arm processors, there are gaps in the software that must be addressed before considering this technology for future platforms much larger in scale than Astra.”

As part of a multilab partnership, researchers anticipate continually improving Astra and future platforms. “Sandia researchers partnering with counterparts at

Los Alamos and Lawrence Livermore national laboratories expect to develop an improved software-and-tools environment that will enable mission codes to make increasingly effective use of Astra as well as future leadership-class platforms,” says Ken Alvin, senior manager for extreme scale computing. “The Vanguard program is designed to allow the NNSA to take prudent risks in exploring emerging technologies and broadening our future computing options.”

Astra will be installed at Sandia in an expanded part of the building that originally housed the innovative Red Storm supercomputer.

The Astra platform will be deployed in partnership with Westwind Computer Products Inc. and Hewlett Packard Enterprise.

“Astra, like Red Storm, will require a very intimate collaboration between Sandia and commercial partners,” says James Laros, Vanguard program lead. “In this case, all three NNSA defense labs will work closely with Westwind, HP Enterprise, Arm, Cavium and the wider high-performance computing community to achieve a successful outcome of this project.”

Astra takes its name from the Latin phrase “per aspera ad astra,” or “through difficulties to the stars.”

Inside . . .

DA talks tough on crime	2
Joan Tafoya named IISE fellow	2
2018 Math and Science awards	3
Fireproofing your home	3
Zero Waste success stories	4-5
Sandia at PRIDE event	7

DA talks tough on metro crime

New speaker series addresses vital local issues

By Stephanie Holinka

Bernalillo County District Attorney Raúl Torrez gave a Sandia audience some sobering facts at the inaugural session of the Community Engagement Speaker Series. “The reality is, you’re living in a community with a very serious crime problem,” Torrez said. Torrez candidly discussed crime in the Albuquerque metro area and how past anti-crime efforts have fallen short, and he introduced a few ideas, including ways to ameliorate the early childhood trauma that often turns someone toward crime. Community Involvement and Associate Labs Director for Mission Assurance Mark Sellers hosted the session at the Schiff Auditorium. Torrez said between 2014-2016, Albuquerque experienced the greatest increase in crime of any of the 30 largest U.S. cities, according to the FBI’s Uniform Crime Reports. In that two-year period, Albuquerque showed a 26 percent increase in all crime, violent crime and property crime, and a staggering 102 percent increase in car thefts, making it the No. 1 U.S. city for auto theft. Also alarming, Torrez said, is that crime rates are coming down in most larger cities, while Albuquerque’s continues to rise. Torrez said one barrier to addressing the problem are shortcomings in the system of investigating crimes and processing criminals, which is organized chronologically based on the court system calendar — not the most efficient way to fight crime or assess risks for future crime, he said. “That means that the most dangerous person in an

investigator’s stack of cases to be investigated could be 20-cases deep. Right now there’s no way to address that,” Torrez said. Crime in Albuquerque hits close to home for Sandia/New Mexico. The International District, located just northwest of the Wyoming gate, has the greatest concentration of crime in the city. With less than 7 percent of the metro area’s population, it has 27 percent of murders, 20 percent of carjackings and 37 percent of nonfatal shootings. Torrez added that 32 percent of those arrested for robbery come from that area, so he wants to expand efforts there, both for law enforcement and community support. Torrez said his office doesn’t have a way to share electronic information with other parts of the criminal justice system due to system incompatibility, which leads to collaboration problems. “We still use WordPerfect,” he told the shocked crowd. A Sandia researcher has been working with Torrez’s office to find ways to improve data analysis and visualization. The office has hired a programmer to help address some of the data sharing and analysis problems. Overall, Torrez’s office is looking for ways to focus on the small number of people who commit the most crimes. The goal, Torrez said, is that “if you’re going to be a prolific overperforming criminal, you’re entitled to your own personal prosecutor. We’re going strive for VIP service.” In addition to focusing time and resources on those overperformers, Torrez and his office seek to chip away at the mental health and child trauma issues that can often put someone on the path to prison. A significant risk for committing crime later in life is experiencing multiple adverse childhood experiences, early traumatic events that reshape people’s lives, such as abuse, violence and discrimination. Torrez said about 75 percent of male and 87 percent of female incarcerated juveniles have experienced five or more such incidents in their life. “In my view, when you’re talking about mental health and addiction issues later in life, what you’re talking about is undiagnosed, untreated and unrecognized childhood trauma experienced sometime between birth and 7 years old,” he said. Torrez is the co-chair of Mission: Families, a new program of the United Way of Central New Mexico focused on improving family stability. “It’s not about giving prosecutors or the mayor toys. It’s about making early and sustained investments in the kids of this community.” It costs \$45,250 per year to house an inmate in prison, Torrez said. “The community will pay for these kids and these broken families one way or another. The question is, are we going to wait until something horrific happens, and I’m left trying console a family after someone’s been killed, and I must send someone to prison? Or are we going to start thinking differently and making investments in ourselves and our communities to make a difference in the lives of kids and families,” Torrez said.



Bernalillo County District Attorney Raúl Torrez (Photo by Lloyd Wilson)

Torrez is an Albuquerque native, a Harvard and Stanford graduate, and a former federal prosecutor and senior adviser to the Department of Justice in President Obama’s administration. Helen Wertheim, co-chair of Mission: Families, followed his talk with a discussion of the issues that families face, which often leave children unable to succeed in school.

New series focuses on major local problems

Over the next year, a variety of speakers who represent organizations that are tackling some of Albuquerque’s most significant issues, such as poverty, education and welfare will visit Sandia and talk about their community work through the new Community Engagement Speaker Series, says organizer Roberta Rivera of Community Involvement. Ed Rivera, CEO of United Way of Central New Mexico, provided details to the audience about the charity’s commitment to community change and discussed Sandia’s long-standing role in fostering change. Since 1957, Sandia has contributed \$107 million to the community through the United Way, along with many board chairs and volunteers, Rivera said. Members of the workforce can watch the archived talk online.

Tafoya named industrial engineering fellow

By Manette Newbold Fisher

For her dedication to optimizing business processes and systems, Joan Tafoya recently was named a fellow of the Institute of Industrial and Systems Engineers, which recognized her work solving complex technical problems and instituting lean practices — passions that drew her to Sandia National Labs last fall after a 27-year career at Intel. Joan received the Fellow Award last month at the IISE annual conference in Florida. Most recipients are academics, but Joan is one of the few chosen with an industrial background. She is also one of only a few women named a fellow this year. Joan was nominated last year by colleagues and associates from Intel, TransSolutions, Jabil and The Poirier Group. All highlighted her innovative work with commercial drones, innovative technology for supply chain, global leadership, lean practices, involvement in IISE and community work. They also praised her abilities to combine strategic business goals with technical execution within Intel. One career highlight involved leading teams that produced more than 90 lightshows for Disney using commercial drones, a feat that required about 30,000 launches over eight weeks. Around the time Joan was nominated as a fellow, she



Senior Manager Joan Tafoya was recently named a fellow of the Institute of Industrial & Systems Engineers. (Photo courtesy of Katie Kosko)

retired from Intel, but it wasn’t long before she started looking for something to keep her busy. Joan said she came across a job posting for her current position at Sandia, establishing and maintaining the Laboratory Operating System. “I retired and was ready to take a bit of time off. On a whim, I went to the Sandia website and looked at jobs and saw the LOS senior manager position,” she says. “When I read it, I thought, ‘Oh my gosh, that’s what I’ve been doing for most of my career.’ I love the idea of creating a sustaining structure to make us better at our work, allowing us to add more value for the customer by becoming more efficient and effective.” The LOS comprises six enablers with tools and processes to shape thinking and behaviors, and the system can be applied to work across the Labs. With the help of a small team, Joan hopes to create a “one-lab mentality.” “We all create knowledge, acquire knowledge and transfer knowledge. The LOS is all about creating, acquiring and transferring knowledge to become more efficient and effective in support of the mission. When we are doing these things well, I believe people are much more satisfied with their work,” she says. Josh Parsons, director of Business Management, said Joan brings a unique lens and experience to Sandia that helps the culture labs-wide. “The goal of the LOS is to help Labs employees learn, accelerate, innovate and improve,” Josh says, adding that Joan’s experience is helping the team deploy the LOS in a way that tailors leading industry practices to Sandia’s Federally Funded Research and Development Center mission. IISE is the world’s largest professional society dedicated to supporting industrial engineering. The international nonprofit association provides education, training, research and development to professionals in the field.

Exceptional service in the national interest

SandiaLabNews

http://www.sandia.gov/news/publications/labnews/

Sandia National Laboratories

Albuquerque, New Mexico 87185-1468
Livermore, California 94550-0969
Tonopah, Nevada • Nevada National Security Site
Amarillo, Texas • Carlsbad, New Mexico • Washington, D.C.

Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia, LLC., a wholly owned subsidiary of Honeywell International, Inc., for the U.S. Department of Energy’s National Nuclear Security Administration under contract DE-NA0003525.

Jim Danneskiold, Acting Editor 505/844-0587
Darrick Hurst, Managing Editor 505/844-8009
Michael Lanigan, Production 505/844-2297
Tim Deshler, Production and Web 505/844-2502
Randy Montoya, Photographer 505/844-5605
Patti Koning, California site contact 925/294-4911

Contributors: Michelle Fleming (Ads, Milepost photos, 844-4902), Neal Singer (845-7078), Stephanie Holinka (284-9227), Michael Baker (284-1085), Troy Rummler (284-1056), Valerie Larkin (284-7879), Lindsey Kibler (844-7988), Meagan Brace (844-0499), Mollie Rappe (844-8220), Kristen Meub (845-7215), Manette Newbold Fisher (844-1742), Michael Padilla (925-294-2447), Julia Bernstein (925-294-3609), Jim Danneskiold, manager (844-0587)

Classified ads 505/844-4902

Published on alternate Fridays by Internal & Digital Communications Dept. 3651, MS 1468



Young women encouraged to blaze their own trails at Sandia’s Math and Science Awards

Sandia Women’s Connection honors exceptional local scholars

By Madeline Burchard

More than 30 students recently visited Sandia California to attend the 27th annual Sandia Math and Science Awards, a flagship program of the Sandia Women’s Connection.

Every year, the Sandia Women’s Connection receives nominations from local high schools and hosts a ceremony to honor the award winners for their accomplishments in STEM (science, technology, engineering and math). During and after the ceremony, students are paired with Sandia mentors, who encourage their future studies and answer questions.

Heidi Ammerlahn, director of the Homeland Security and Defense Systems Center, kicked off the evening by talking about what attracted her to Sandia’s mission.

“My career at Sandia has allowed me to follow my interest in math and computer science while serving my community,” Heidi said. “I encourage you all to consider careers in public service.”

Mentors make a difference

Associate Labs Director Dori Ellis congratulated the young scholars in a video address and shared the beginnings of her career.

“Men in my father’s generation believed that women should only be teachers or nurses. That is until they get married, and then they should stay at home and be a good wife and mother,” Dori said. “It was a Sandia mentor, Tom Lane, that encouraged me to apply for an education program at Sandia. That one-year master’s degree program was life changing for me.”



Heidi Ammerlahn, left, with the Sandia National Laboratories Women’s Connection and the director of homeland security and defense systems, congratulates a student at the 2018 Sandia Math and Science Awards.

(Photo by Randy Wong)

Dori stressed the importance of seeking mentors and allies.

“Do not hesitate to reach out to us as you make your way,” she said. “We are all rooting for you.”

Plan to change your plans

Carolyn Fisher, a Sandia postdoc in systems biology, gave the keynote remarks. Fresh from finishing her own academic journey, she shared some words of wisdom.

“Please do not be afraid to dabble,” Carolyn said. “When I was in high school, I wanted to be a crime scene detective. Now, I search for algae predators. Give yourself permission to change your mind and follow your interests.”

Sandia
CaliforniaNews

Exceptional service in the national interest

2018 Sandia Math and Science Award winners

Outstanding Achievement in Mathematics

- Nicole Park, Amador Valley High School
- D'Aysia Johnson, Castlemont High School
- Arnetta Olden, Coliseum College Preparatory Academy
- Neha Harpanhalli, Dublin High School
- Kelly Francesco Ball, East Union High School
- Jasmine Zhang, Foothill High School
- Silvia Pablo Cruz, Fremont High School
- Colleen McCandless, Granada High School
- Nikolle Sanchis, Lathrop High School
- Zoe Russ, Livermore High School
- Josie Voss, Merrill F. West High School
- Madelyn Beckner, Millenium High School
- Areej Choudhry, Sierra High School
- Isabella Ellis, Tracy High School
- Renny Manansala, Weston Ranch High School

Outstanding Achievement in Science

- Esha Chawla, Amador Valley High School
- Ariana Perfino, ARISE High School
- Ma. Cristina Arlantino, Castlemont High School
- Paulina Vazquez, Coliseum College Preparatory Academy
- Di Zhuang, Dublin High School
- Nisha Prabhakar, Foothill High School
- Ashley Zhuang, Granada High School
- Kara Asuncion, John C. Kimball High School
- Eghosa Ogbeide, Lathrop High School
- Indira D'Souza, Livermore High School
- Julia Tang, Manteca High School
- Alyssa Costa, Merrill F. West High School
- Ormina Naveed, Mountain House High School
- Yuvleen Kaur, Millenium High School
- Rakebe Gebrekidan, Oakland Technical High School
- Sophia Sperman, San Leandro High School
- Sophia Schmiedt, Sierra High School
- Yael Berrol, Skyline High School
- Meena Yuqob, Tracy High School

Fireproofing your home

By Chris LaFleur

Imagine having to wear a fireproof mask all day, every day, in your own home and never being able to take it off — no matter how suffocating it feels. That’s what it’s like for people who risk being fired if they acknowledge their sexual orientation at work.

As a fire protection engineer, I’m naturally aware that suffocation is a physical effect of being trapped in a literal fire. However, suffocation is also the emotional effect of being forced to live a secret life due to the fear of getting fired.

I have been at Sandia for eight years, and I think of the Labs as my second home. This Pride Month, I want to honor Sandia’s commitment to diversity and inclusion and express gratitude for the corporate support of all of our employee resource groups on campus (more on this later).

It is a gift to get to do the work that I love, at a place I love, and be open about the person I love. I also want to acknowledge that there are many people unable to share this gift. There are still a double-digit number of states in this country that do not offer any legal protections for lesbian, gay, bisexual or transgender people in the workplace.

Blazes I’ve seen

I grew up in Texas, which is one of those states with no protections. Two of our best varsity sports coaches were fired from my high school in Dallas while I was a student: one for being a lesbian and the other merely for looking like a lesbian. This was devastating to me as a basketball player because the replacement coaches were nowhere near as good. It was also terrifying to me as a young lesbian. This had a profound effect as I saw firsthand how a career can be impacted. I spent the rest of high school wondering what job I could have as an adult that would be safe for me.

To my dismay but not my surprise, a public-school

teacher in my hometown was fired just last month for showing her students a photograph of a woman and identifying that woman as her wife. She was not allowed to share a photo of her family, like the one I am sharing here with you. That is my wife, Mary Watson, on the top right, and our two children, Derek and Sara Reitzel.



FAMILY PORTRAIT — Chris LaFleur, left, and her wife, Mary Watson, with their children, Derek and Sara Reitzel.

(Photo courtesy of Chris LaFleur)

Traveling by fire road

I knew I wanted to pursue fire risk analysis from the moment I first learned it was a possible career. I could not believe that fire science was a subject I could actually study in graduate school. I spoke to fire professionals and thought to myself, “This just sounds like the coolest thing ever!”

Once in my master’s program, I began a course that required me to analyze data from fire tests conducted at Sandia. Right away, working at the Labs became my goal. My professor told me Sandia only hired people

with Ph.D.s. His comment helped motivate me to continue with school. Once I finished my Ph.D. at the University of Michigan, I applied to Sandia and have never looked back.

Now, I conduct fire risk analysis for hydrogen fuel cell vehicles, hydrogen refueling stations and other emerging energy technologies. It is the job and the employer I wanted right from the start, and I am very grateful Sandia is not one of those places that could fire me for who I am. But as accepting as Sandia is, there is still work to do here.

Mary, my wife, also works at Sandia as a facilities manager. She has a colleague she now considers a friend. But when they first met, he revealed to her that he had never knowingly befriended a gay person. Over time, he came to both respect her and enjoy her company. Recently, he told her, “Because of you, I changed” and is more open than he was before.

Keeping risk under control

Mary’s story — and other stories like it — are a big part of why I became a leader in the Sandia Pride Alliance Network employee resource group. Sensitivity training can be helpful, but nothing replaces one-on-one relationships between people. These are exactly what SPAN is designed to foster.

The acronym SPAN and our logo are meant to evoke a figurative bridge, while social events and lunchtime discussions help create real ones between lesbian,

gay, transgender or bisexual Sandians; our allies; and those who’d like to become allies.

I’ll end here with an invitation to anyone reading: Please, come to one of our events. We’d love to have you. A calendar with events both in Albuquerque and in Livermore is on our website. If you’d like to start just by reading about how to be an ally, there are resources on the site for that too.

Join us, and together we’ll make sure we help spark connections between colleagues that will make all of us feel more at home.



Winning the war against waste: Zero Hero success stories

By Lyndsy Ortiz
Illustrations by Michael Vittitow

On Sandia's front lines, heroes wage a campaign to usher in an era of Zero Waste by 2025. The tasks aren't easy, but in such circumstances heroes arise. These Zero Heroes take on the tyranny of Tyvek suits, pummel the plastic foam platoons and even battle the bins of discarded badges. Their message is that everyone at Sandia needs to get in the fight. Sandia Zero Heroes are uniting to make a difference and help save the planet; however, these heroes can't do it alone. Sandia needs you to join the effort to reach the goal of Zero Waste by 2025. Read about the heroes who are already making a difference, learn from their inventiveness and environmental consciousness and visit zerowaste.sandia.gov to enlist and start on your path to becoming one of the few — the Zero Heroes.

David Blagg — Conquering Mt. Nitrile

In the battle to keep nitrile gloves from piling up into a mountain, David, a technologist, recognized how many gloves were being used and thrown away. At a trade show, David learned about one manufacturer's recycling program and worked with Sam McCord (aka Sandia Sam), the Waste Management coordinator for the Zero Waste effort, to set up a Sandia account to ship used gloves to be recycled. David picks up the used gloves, boxes them to ship out and communicated his process to his team and building residents. "I like to be a good steward of the environment," he said. David encourages others to become Zero Heroes. "People need to be pushed along, and they should send ideas for recycling to the Waste Management team." David was recognized for recycling 2,500 pounds of gloves in 2017. To attain victory in the Zero Waste effort, Sandia needs more heroes like David. What can you do to make a difference?

SANDIA'S JOURNEY TO ZERO WASTE



Copeland Neeley — Battling badges beyond the badge office lines

The tide is turning in the battle of discarded badge holders at Sandia's badge office, thanks to Copeland, a personnel security specialist. He remembered learning about the Zero Waste goal by 2025 at his new-hire orientation and questioned whether there was a way to recycle the many used badge holders and security plastics thrown away at the badge office. Copeland obtained recycle bins from Sandia Sam for the multitude of collected plastics and collects the bins when they are full. Copeland had some advice to other aspiring Zero Heroes: "Look at materials you use and make small changes. Do your part." Copeland feels the 2025 goal is doable. "It will be very difficult, but achievable. The Zero Waste team knows their stuff, and their passion will spread through Sandia," he said. Copeland's words of encouragement come straight from the front lines of the Zero Waste effort.

Justin Griffin — Taking down the Tyvek tyranny

Tackling the tyranny of used Tyvek suits is no easy feat, but another Sandia Zero Hero was equal to the task. Justin, an ES&H technologist, works where Tyvek suits are used and discarded in high volumes. He followed the existing process of collecting them into a bin to be boxed up and recycled by the Pollution Prevention group. Justin, who was already familiar with the Zero Waste goal, took it upon himself to keep this process going when he joined the department. He recycles at home, which was a driving factor for him to recycle at work. He says everybody needs to do their part, both on the homefront and the front lines. Justin had some advice for future Zero Heroes: "Recycling is the right thing to do to keep waste out of landfill. If you see something can be done, do it. Network and brainstorm with others such as the Zero Waste team." Great advice from a true Zero Hero. Will you heed the call and join the fray?



Selina Pedroza – Liberating buildings with Zero Waste

To see the progress toward reaching Zero Waste by 2025, look no further than the recent liberation of one of Sandia's buildings to become the first truly Zero Waste building. Selina, an ES&H coordinator in the Primary Standards Lab



Diane High and Lisa Teves — Pummeling plastic foam at the Thunderbird Cafeteria



Pummeling the dominating presence of plastic foam containers was too much of an undertaking for just one hero, so Diane High, the general manager of the Thunderbird Cafe for Taher Inc., and Lisa Teves, a registered dietician who administers the Taher contract, teamed-up to eliminate plastic foam to-go containers from the cafe. Diane and Lisa were aware of the Zero Waste goal and the massive amounts of foam materials that were going to the landfill. Beginning in March, all to-go containers are recyclable or compostable. The cafe encourages diners to save money and resources by bringing in a cup or water bottle or buying a refillable one from the cafe. Refills are \$1. "However, moving away from foam is really just an important start. Looking for ways to offer more locally-sourced foods and continually reducing waste and carbon footprint will be an ongoing effort," Lisa said. Lisa and Diane are excited to contribute to the Zero Waste goal. "We need a lot more people to get involved for success," Diane said. Lisa added, "If you plan to eat at the Thunderbird Cafe, please use a regular plate and silverware, and, if taking food to go, please take some time to learn more about using containers provided at the cafeteria and locations throughout the campus for composting and recyclables like plastic and aluminum." Terrific team-ups are just one more avenue to a victorious Zero Waste effort. Why not join the team today?

Joe Martinez — Clearing out the 3D cartridge trenches

Straight from the trenches of cutting-edge technology, one hero is tackling the need to recycle used 3D printing cartridges. Joe, a mechanical technologist who works in the 3D printer service center, noticed how the printer cartridges were piling up in his building. He also saw the hassle of boxing and shipping cartridges back to the manufacturer. Joe reached out to the Zero Waste team in the Infrastructure Operations Division and helped the team develop a process for boxing and returning used cartridges to the manufacturer to be reused. Joe then shared this simplified process with his team. Contributing to the Zero Waste goal sometimes is just a matter of doing the right thing. Joe says, "The simple thing is the right thing."



Chrystal Sandoval and Jeffrey Harkins — Uniting for recycling victory


No victory is achieved alone in the effort to reach Zero Waste. Chrystal and Jeffrey work in Logistics to meet Sandia's shipping needs. They helped Zero Hero Joe Martinez get the upper hand in the 3D cartridge skirmish by attacking the problem from a different angle. Jeffrey noticed that organizations packaged used 3D cartridges for recycling on pallets, but individual cartridges carried prepaid labels. To expose the labels, packers were forced to tear the pallet apart and individually package each cartridge for shipment. This process took extra time and resources, and completely voided the organizations' packaging efforts. Jeffrey proposed that organizations work directly with the recycle company to obtain a single label for the entire pallet instead of

40-plus individual labels. His team lead, Chrystal, endorsed the idea, brought it to the attention of the team and brought in Sandia Sam and his team to help them modify the process. The new, single-pallet process lowers time, workload and cost and provides faster customer service. Jeffrey said he feels Sandia is up to the challenge of winning the Zero Waste effort by 2025. "We have to start somewhere; it's difficult but can be done. People need to buy into the process." Chrystal agreed, saying, "Sandians need to look at things differently and create a culture of change." Chrystal and Jeffrey are shining examples of how united heroes can make difference. Are you ready to join their ranks?



There's one other hero worth mentioning who appears in many of these stories — Sandia Sam, who works on the Zero Waste team in Infrastructure Operations. Who is Sandia Sam? He's the leader of the pollution prevention platoon who needs you to enlist today to help him and the rest of the Zero Heroes reach Sandia's goal of Zero Waste by 2025. Not sure where to start? Sandia Sam is the man with a plan whose team will help you take the first steps toward making an impact in the Zero Waste effort on the front lines of your job or work area. Learn what Sandia Sam can do for you, and join the team to help propel Sandia to victory in its Zero Waste goal. Visit zerowaste.sandia.gov to enlist today and start making a difference. Together, we can reach Zero Waste by 2025.

Mileposts



New Mexico photos by
Michelle Fleming

California photos by
Randy Wong



Jose Rodriguez 40



Allyn Anderson 35



Mark Anderson 35



Larry Bacon 35



Jeannette Moore 35



Debra Post 35



Edward Russick 35



Greg Wickstrom 35



Alan Armentrout 30



James Deaguero 30



Dave Denning 30



Susan Esfahani 30



Lisa Garcia 30



Jim Heise 30



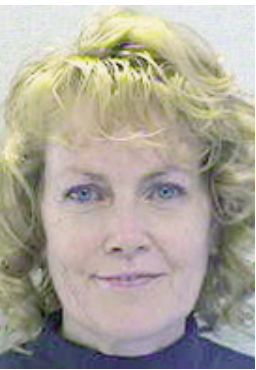
Daniel Kettleborough 30



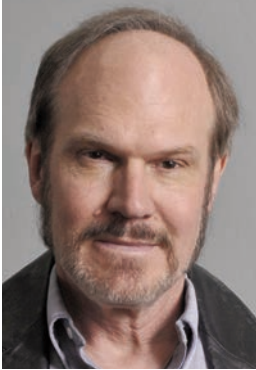
Timothy Miller 30



Jeff Rienstra 30



Kay Rivers 30



Dale van Dongen 30



Mark Yee 30



Denise Bleakly 25



Sharon Del Prete 25



Paul Dodd 25



Kurt Kunzler 25



Davina Kwon 25



Kelly Chavez 20



Douglas Ghormley 20



Gary Grest 20



Robert Holland 20



Elizabeth Madril 20



Mari Arnold 15



Kevin Campbell 15



Susan Caskey 15



Craig Crowder 15



Thomas Gaffney 15



Nazir Khalil 15



Tian Ma 15



Jared Madsen 15



Shawn Pautz 15



Enrico Quintana 15



Eric Shields 15

SANDIA CLASSIFIED ADS

MISCELLANEOUS

GUITAR, Gibson ES335, vintage Sunburst finish, classic "57" Humbucker pickups, Tune-O-Matic bridge (2000 Nashville), serial #03090594, w/case, excellent condition, \$1,950. Schneider, 505-270-4056.

DINNERWARE, Noritake Alice, 10 settings, 84-pcs. total, no chips, no cracks, \$200. Sparling, 281-7267.

GAS DRYER, works great, new home wired for electric not gas, \$75 OBO. Santamaria, 619-300-6042.

REEL-TO-REEL TAPE RECORDER, TEAC, needs belt; Garrard turntable; Sansui tuner amp; instructions/tapes, \$160. Williams, 271-4902.

QUEEN PANEL BED, Steel Magnolia, 2 nightstands, Paula Deen Home, antique white/distressed, high quality, excellent condition, \$2,000. Leger, 505-573-0641.

SIMS DVD, are you a SIMS fan/collector, 16-single/multi-disc DVDs, original value \$300, asking \$50 OBO. Knief, 821-3868.

ROWING MACHINE, Stamina X AMRAP, w/chest strap heart rate transmitter, high quality, new condition, \$450. Montoya, 575-602-6059.

FAMOUS MARCHES, CD by Decca, No. 4784228, made in EU, Virtuoso series, like new, \$5. Wagner, 505-504-8783.

OLD COOL CLOCKS, mechanical, antique, vintage, working, serviced, excellent condition. Ross, 332-0659.

DOLL HOUSE, KidKraft Wood Products, furniture, tri-level, 33" x 16" x 48", \$70; girl's Schwinn, 20-in., pink, \$50. Valdez, 505-550-1993.

SOFA, leather, electric, 3-pc., contact for photos & more info, \$400 OBO. Flores, 505-280-1782.

TACTICAL BACKPACKS, brand new, 5.11 tactical (covert); Direct Action (Dragon Egg); Voodoo tactical; Elliptigo Arc8 bike \$800; text for prices/photos. Pacheco, 505-816-8501.

ELECTRIC RANGE, Whirlpool, model RF330PXAW, \$50 OBO. Dingel, 505-818-8933.

LUGGAGE TRAILER, X-Cargo, w/hitch, 1 axle, w/bracket for cooler or toolbox, in East Mountains, great for motorcycle travel, \$375. Willmas, 505-281-9124.

ELLIPTICAL MACHINE, Octane, new, \$500; Horizon home gym set, \$250; Schwinn 10-spd. road bike, \$75. Sanders, 505-822-1486.

MOVING SALE, June 30, 8 a.m.-3 p.m., 14204 Marquette NE, Albuquerque, furniture, bedding, kitchen, Christmas, clothes, misc. items. Brown, 366-1505.

FURNITURE, Ethan Allen Country French, rectangle end table, small chest, glass-top coffee table, fruitwood, photos available, \$750/all. Furry, 228-4759, craig.furry@comcast.net.

PLAYSTATION 4, brand new, jet black, 1 TB, paid \$299, asking \$260. Ochoa, 505-453-4251.

SOUND SYSTEM, Bose, just like https://tinyurl.com/y9qo4xx4, \$100; top-load washer, workhorse, \$25. Vigil, 575-386-6377.

ALFALFA BALES, \$7 ea.; Ford longbed camper shell, red, \$300 OBO. Schroeder, 917-4516.

DRZ400s PARTS, ProMoto rack, Corbin seat, Muzzy exhaust, Givi V46 case, Yamaha WR250R/X skidplate, more, prices/photos at www.smug-mug.com/gallery/n-hvZWG/. Yazzie, 505-221-9752.

CURIO CABINET, 7' T x 36" W x 17" D, glass shelves, mirrored back, beautiful, like new, paid \$899, asking \$475. Klein, 384-2695.

OVERHEAD CAR RACK, Thule, free. Robles, 294-6904.

PORTABLE DISHWASHER, '15, GE, model GSC3500DBB, attaches to faucet, \$350. Black, 505-933-3441, ask for Lorrie.

BABY GATES, set of 2, white frame w/clear panel, great for stairs, good condition, photos available, \$40/both. Vigil, 505-400-0639.

How to submit classified ads

DEADLINE: Friday noon before week of publication unless changed by holiday.
Submit by one of these methods:
• **EMAIL:** Michelle Fleming (classads@sandia.gov)
• **FAX:** 844-0645
• **MAIL:** MS 1468 (Dept. 3651)
• **INTERNAL WEB:** From Techweb search for 'NewsCenter', at the bottom of that page choose to submit an ad under, 'Submit an article'. If you have questions, call Michelle at 844-4902.
Because of space constraints, ads will be printed on a first-come basis.

Ad rules

1. Limit 18 words, including last name and home phone (If you include a web or e-mail address, it will count as two or three words, depending on length of the address.)
2. Include organization and full name with the ad submission.
3. Submit ad in writing. No phone-ins.
4. Type or print ad legibly; use accepted abbreviations.
5. One ad per issue.
6. We will not run the same ad more than twice.
7. No "for rent" ads except for employees on temporary assignment.
8. No commercial ads.
9. For active Sandia members of the workforce, retired Sandians, and DOE employees.
10. Housing listed for sale is available without regard to race, creed, color, or national origin.
11. Work Wanted ads limited to student-aged children of employees.
12. We reserve the right not to publish any ad that may be considered offensive or in bad taste.

TABLE SAW, Craftsman, 10-in., flex drive, more, \$150; DeWalt model DW705 12-in. compound saw, \$75; DeWalt DC970 1/2-in. cordless drill, \$25. Jacobson, 898-1397.

MATERNITY CLOTHES: blouses, pants, jeans, shorts, sold in pcs. or the lot; puppy play pen, Eddie Bauer, gently used, \$10. Ruiz, 575-650-2858.

LADIES RIDING BOOTS, Effingham, leather, English (show), tall, black, size 8.5, excellent condition, \$200 OBO. Rivers, 505-720-4701.

TRANSPORTATION

'08 TOYOTA SR5 4RUNNER, 4WD, leather, heated seats, sunroof, 108K miles, great condition, \$13,000 OBO. Lavin, 505-553-9587.

'99 NISSAN ALTIMA, 5-spd. manual, good AC/heat, nonsmoker, Michelins, all maintenance records, 102K miles, \$2,500. Hardy, 505-398-4760.

'07 FORD F250 XLT, super cab, 6.8L V10, tow pkg., shell, retractable Tonneau cover, 1 owner, 52K miles, \$12,500. Kiscock, 507-0822.

'05 MINI COOPER, manual, beige, 30+mpg, 128K miles, runs great, no issues, \$6,500 OBO. Carrasco, 505-803-3831.

'13 PRIUS C, blue, some cosmetic defects on outside, well cared for & maintained, 59K miles, \$10,000. Horne, 719-660-7852.

'05 VW BEETLE, diesel, 5-spd. manual, 45-48-mpg, solid ride, 206K miles, \$3,200. Chown, 505-382-8100.

'11 HYUNDAI SONATA HYBRID, clear title, no accidents, new tires, 104K miles, excellent condition, \$7,999. de la Fe, 505-459-4685.

REDWOOD STRIP CANOE, 16-ft., 2-pc., square stern, paddle, blueprints for sail & rowing station, \$1,500. Sullivan, 505-450-7338.

MOOTS TITANIUM YBB BIKE, small frame, Shimano XTR w/hydraulic brakes, Fox fork, tubeless, \$1,500. Shaw, 505-980-7491.

CANNONDALE OPTIMO R1000 ROAD BIKE, 53 cm carbon frame, 22-lbs., Shimano hardware, Mavic rims, hand-made USA, \$1,000 Reed, 505-573-2242.

'12 HARLEY-DAVIDSON SPORTSTER 48, 1200 cc, HD orange, <300 miles, \$7,500. Fondren, 505-463-5572.

DOWNHILL MOUNTAIN BIKE, Turner DHR, size L, https://tinyurl.com/yayq5twc, \$1,400; mountain bike wheels, i9 hubs, https://tinyurl.com/yaxnc6bl. Harding, 505-977-0897.

REAL ESTATE

3-BDR. HOME, 1,899-sq. ft., 2565 Lema Rd. SE, Rio Rancho, \$185,000. Rivas, 505-203-2399.

3-4 BDR. TOWNHOME, 2-1/2 baths, 2-car garage, 2,666-sq. ft., accessible to park, bike paths, shopping & Sandia, MLS#912865. Wells, 505-292-0179.

4-5 BDR. HOME, 2-1/2 baths, 2-1/2 car garage, 2,690-sq. ft., La Cueva High neighborhood, \$385,000. Lin, 505-369-5312.

4-BDR. HOME, Hidden Valley, near Four Hills, beautifully remodeled, Zillow.com: 713 Fennel Ct. SE, neighborhood pool, \$263,000. Volker-Rector, 505-710-6290.

WANTED

MUSICIANS, to play & join Dukes of Albuquerque Band, call for more info. Gregory, 235-8787, ask for Cindy.

LOVING HOME, Harlequin Great Dane, female, purebred, spayed, shots current, 3 yrs. old, great w/kids, lives w/cats, must be only dog. Hodges, 505-977-7491.

Viva la Vida: Sandia at Pride



2018 PRIDE PARADE SANDIA BANNER — Sandians Chris LaFleur, left, and wife Mary Watson walk down Central Avenue, June 9, during the city's annual Pride Parade. About 30 Sandia Pride Alliance Network members, along with their family and friends, walked the nearly 2-mile parade route together. (See story, page 3)

(Photo by Jennifer Anaya)



Robot Rivals Rally to Rope in Rewards at Rodeo

Photos by Randy Montoya

Last week, Sandia hosted the 12th annual Western National Robot Rodeo, a weeklong, 11-event competition where eight civilian and military bomb squads from around the region solved challenging, simulated scenarios.

“Each scenario is designed to push the teams and the robots to their limits, so they can learn how to work around those limits and gain confidence,” said Jake Deuel, Sandia robotics manager and event coordinator. “The bottom line of the Robot Rodeo is we’re trying to take good robot operators and turn them into great robot operators.”

In one scenario, “The Tube Station” (above), the squads scan the “tube” for radiation. In another, “Red Dawn” (bottom right), the bomb squads worked their robots through the wreckage of a downed “enemy” fighter to find “intel” and other important items. A spotter made sure the robots suffered no harm.

The Albuquerque Police Department won the competition.

— Mollie Rappe

